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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,779	03/08/2005	Toshiro Hada	SAE-037	5861

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EXAMINER	
JOY, DAVID J	

ART UNIT	PAPER NUMBER
1774	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,779	HADA ET AL.	
	Examiner	Art Unit	
	David J. Joy	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,9-11,16,18 and 19* is/are rejected.

7)☒ Claim(s) *5,7,8,12-15 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *06/15/05, 12/22/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 4, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by the U.S. Patent of Takeuchi (5,593,938; hereinafter "Takeuchi-938").

4. Takeuchi-938 teaches a heat-sensitive recording material containing a transparent film, a heat-sensitive recording layer that is formed on one side of the transparent film and contains an electron-donating compound, and electron-accepting compound and a binder, a protective layer that is formed on the recording layer and contains an aqueous

resin, and a backside layer that is formed on the other side of the transparent film and contains a pigment and a binder (see Abstract; see also Column 7, Line 23-64; see also Column 12, Lines 60-67). Additionally, Takeuchi-938 teaches that the backside layer contains spherical resin particles having a mean volume particle diameter of 2 to 15 μm in an amount of 0.2 to 5.0 mass % of the backside layer (see Column 7, Lines 23-48)

5. Takeuchi-938 teaches that the binder is the backside layer is a (meth)acrylamide-based resin, or that is can be some other binder resin(s), such that the binder resin has a glass transition temperature of 180 to 250 °C (see Column 7, Lines 5-22). Despite the fact that Takeuchi-938 never explicitly recites the glass transition temperature of the binder resin, it follows that this property is anticipated as a result of the teaching of the exact species claimed in the instant application. The claiming of a new use, new function or unknown property, which is inherently present in the prior art, does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). Mere recitation of a newly-discovered function or property, inherently possessed by things in prior art, does not cause claim language drawn to those things to be distinguishable over prior art.

6. Takeuchi-938 teaches that the transparent film is a polyethylene terephthalate film having a thickness of 40 to 250 μm (see Column 2, Lines 31-41). Also, Takeuchi-938 teaches that the heat-sensitive recording material has a haze value of 10 to 50% (see Example 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi-938, as applied to Claim 1 above, and further in view of the European Patent Application of Shimbo et al. (EP 1 208 995; hereinafter "Shimbo").

10. Takeuchi-938 teaches all of the claimed limitations of the heat-sensitive recording material, as discussed above. However, Takeuchi-938 is silent as some of the specifics of the backside layer. Shimbo, drawn to a light-permeable thermosensitive recording material, teaches that the average thickness of the backside layer is 0.5 to 10 μm and is less than the mean volume particle diameter of the spherical resin particles contained in the backside layer (see ¶ [0064]). Also, Shimbo teaches that the binder in the backside layer has a glass transition temperature of 180 to 250 °C, and that the binder in the backside layer is a (meth)acrylamide-based resin (see ¶¶ [0041], [0042] and [0064]). Specifically, Shimbo recites that the backside layer may be constituted of any conventional materials such as those used in the thermosensitive layer, and it is the teachings of this layer that the details of the binder is discussed. As both of the references are drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention to have made the backside layer with the claimed limitations.

11. Claims 6, 9-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi-938, as applied to Claim 1 above, and further in view of the U.S. Patent of Takeuchi (5,514,636; hereinafter "Takeuchi-636").

12. Takeuchi-938 teaches all of the claimed limitations of the heat-sensitive recording material, as discussed above. However, Takeuchi-938 fails to teach some of the details of the recording material and its constituent layers. Takeuchi-636, drawn to a heat-sensitive recording material, teaches that the protective layer is an acetoacetyl-modified polyvinyl alcohol (see Column 3, Lines 42-51). Also, Takeuchi-636 teaches that the protective layer contains a fluorine-containing surfactant and also at least one of an alkyl phosphate salt, a wax, or a higher fatty acid amide (see Column 2, Lines 41-64; see also Column 10, Line 65 – Column 11, Line 5), and that the alkyl phosphate salt, wax, or higher fatty acid amide is 0.5 to 15 mass % of the protective layer (see Column 3, Lines 14-25). In addition, Takeuchi-636 teaches that the alkyl phosphate salt, wax, or higher fatty acid amide is present in an amount of 50 to 800 mass % relative to the fluorine-containing surfactant (see Example 1 - Column 17, Lines 17-35). With respect to the heat-sensitive recording layer, Takeuchi-636 teaches that electron-donating compound is a leuco dye, and that the leuco dye is microencapsulated in a resin film or is in the form of a resin composite particle containing the leuco dye (see Column 4, Line 49 –

Column 5, Line 38; see also Column 7, Line 41 – Column 8, Line 13). As both references are drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention to have made the protective layer and heat-sensitive recording layer with the claimed limitations.

Allowable Subject Matter

13. Claims 5, 7, 8, 12-15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571) 272-9056. The examiner can normally be reached on Monday - Friday, 9:00 AM - 5:00 PM EDT.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJJ
05/02/2007

RENA DYE
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